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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,167	02/13/2004	Hideyuki Nishikawa	019519-418	4460

21839 7590 11/09/2006

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EXAMINER
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HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 11/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b> <b>Before the Filing of an Appeal Brief</b>	Application No. 10/777,167	Applicant(s) NISHIKAWA ET AL.	
	Examiner Sow-Fun Hon	Art Unit 1772	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 23 October 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☐ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: None.  
Claim(s) objected to: None.  
Claim(s) rejected: 1-3 and 6-11.  
Claim(s) withdrawn from consideration: None.

#### AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See attachment to advisory action.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☒ Other: Attachment to advisory action.

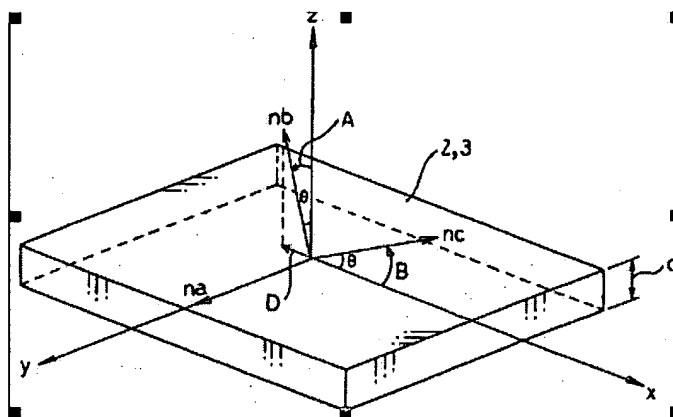
***Advisory Action***

1. Applicant's amendment to claim 6 to correct its dependency from canceled claim 4 to independent claim 1, has been entered, and the claim objection has been withdrawn.
2. Applicant's request for reconsideration regarding the 35 U.S.C 103(a) rejections of claims 1-3, 6-11 over Yamahara as the primary reference, has been fully considered, but deemed unpersuasive for the reasons set forth below.
3. Applicant argues regarding the two cited embodiments of Yamahara, that the first embodiment, wherein  $n_a < n_b < n_c$ , the principal refractive index  $n_b$  inclines to the normal to a surface of the plate, and the second embodiment, wherein  $n_a = n_c > n_b$ , the principal refractive indices  $n_a$  and  $n_c$  are parallel to the surface of the plate, are separate and distinct embodiments, relating to two different liquid crystal display devices having different refractive indices and directions thereof, such that the disclosure of a  $70^\circ$  angle in the first embodiment and the disclosure of a  $90^\circ$  angle in the second embodiment, does not constitute a disclosure of a range of  $70^\circ$  to  $90^\circ$ .

Applicant is respectfully apprised that in the first embodiment, Yamahara teaches a transparent support (column 8, lines 20-26) positioned in a plane (See Fig. 1, wherein 2 and 3 are the phase difference films or plates, column 8, lines 20-25). Yamahara teaches at least one optically anisotropic layer which exhibits biaxiality (column 8, line 58), having a first direction  $a$  with a smallest refractive index  $n_a$  ( $n_a < n_b < n_c$ , column 8, lines 55-60), and a second direction with a largest refractive index  $n_c$  ( $n_a < n_b < n_c$ , column 8, lines 55-60), wherein the first direction  $a$  is orthogonal to the  $z$ -axis, which is a

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direction normal to the xy-plane of the transparent support (direction of principal refractive index  $n_a$  coincides with the direction of the y-coordinate axis, the x, y and z-coordinate axes that are orthogonal to each other, column 8, lines 40-45, Fig. 3).



Yamahara teaches that  $n_b$  is rotated at an angle  $\theta$  from the z-axis (inclines  $\theta$  by in the direction of arrow A with respect to the z-coordinate axis, column 8, lines 44-46,  $20^\circ$ , column 11, lines 39-45) in the xz-plane (in a direction that is perpendicular to the surface, column 8, lines 46-48), and  $n_c$ , which is the second direction with the largest refractive index, is rotated the same angle  $\theta$  from the x-axis, in the xz-plane (inclined by about  $20^\circ$  in the direction of arrow B with respect to the x-coordinate axis, column 8, lines 44-46). Thus  $n_c$  is at an angle of  $(90^\circ - \theta)$  from the z-axis, in the xz-plane, wherein the z-axis is the direction normal to the plane of the transparent support. Yamahara fails to teach in this first embodiment, that  $\theta$  is substantially  $0^\circ$  so that the second direction  $n_c$  substantially coincides with the x-axis in the xz-plane, wherein the angle between the second direction  $n_c$  and the direction normal to the xy-plane, the z-axis, is substantially  $90^\circ$ , within the range of  $80^\circ$  to  $100^\circ$ .

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However, Yamahara teaches in a second embodiment, that all three principal refractive indices  $n_a$ ,  $n_b$  and  $n_c$  are orthogonal to each other, wherein the angle  $\theta$  is substantially  $0^\circ$ , so that the second direction  $n_c$  substantially coincides with the x-axis in the xz-plane, wherein the angle between the second direction  $n_c$  and the direction normal to the xy-plane, the z-axis, is substantially  $90^\circ$ , within the claimed range of  $80^\circ$  to  $100^\circ$ , for the purpose of providing the desired refractive index ellipsoid which does not incline with respect to the transparent substrate (phase different plate, column 17, lines 15-18), and hence the desired phase retardation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a  $\theta$  which is substantially  $0^\circ$ , in lieu of  $20^\circ$  in the first embodiment of Yamahara, so that the second direction  $n_c$  substantially coincides with the x-axis in the xz-plane, wherein the angle between the second direction  $n_c$  and the direction normal to the xy-plane, the z-axis, is substantially  $90^\circ$ , within the range of  $80^\circ$  to  $100^\circ$ , in order to provide the desired refractive index ellipsoid which does not incline with respect to the transparent substrate, and hence the desired phase retardation, as taught by Yamahara. This obviousness is evidenced by US 5,016,988.

US 5,016,988 teaches a retardation film comprising an optically anisotropic layer (birefringent compensator, title, birefringent layer, column 2, lines 8-10) having a first direction with a smallest refractive index (the minimum refractive index  $n_y$ , [direction y] in the birefringent layer face parallel to the substrate surface, column 2, lines 16-22), and a second direction with a largest refractive index (maximum refractive index  $n_x$ ,

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direction x, column 2, lines 16-20), wherein the second direction x is orthogonal to the z direction which is normal to the xy-plane of the support, the angle between the second direction and the direction normal to the plane of the support being  $90^\circ$  (direction perpendicular to the x direction in the birefringent layer face parallel to the substrate surface is defined as a y direction, and the direction perpendicular to both x and y directions is defined as a z direction, column 5, lines 64-68, and the refractive indexes in these directions are defined as  $n_x$ ,  $n_y$  and  $n_z$  respectively, column 6, lines 1-2).

4. Applicant argues that the Office has relied on the two embodiments of Yamahara to disclose or teach a range of  $70^\circ$  to  $90^\circ$  for the angle between the second direction and the direction normal to the xy plane of the transparent support, wherein the first embodiment teaches  $70^\circ$ , which is clearly outside the claimed range of  $80^\circ$  to  $100^\circ$ , and that the second embodiment [while teaching that the angle between the second direction and the direction normal to the xy plane of the transparent support is  $90^\circ$ ] fails to have a first direction with a smallest refractive index and a second direction with a largest refractive index, wherein the first direction is substantially orthogonal to a direction normal to the plane of the transparent support.

Applicant is respectfully apprised that US 5,016,988 is evidence that it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have modified the first embodiment of Yamahara with the second embodiment of Yamahara, by changing the  $\theta$  angle from  $20^\circ$  to  $0^\circ$ , and thus to change the angle between the second direction and the direction normal to the xy plane of the transparent

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support, from 70° to 90°, for the purpose of providing the desired refractive index ellipsoid, and hence the desired phase retardation.

5. Applicant's arguments regarding the valid use of Negoro and JP '485 as secondary references, are directed against the valid use of Yamahara as the primary reference, and are addressed above.


Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sow-Fun Hon

10/31/06

  
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11/1/06